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apple education news

ISSUE 1
SEPT. 1979

Related story on page 4

Education Foundation Sponsored by Apple

The Apple Education Foundation, a non-profit corporation supporting the development of new learning methods through small computers, has been established by Apple Computer Inc.

"The Foundation will distribute hardware equipment for both developmental and demonstration projects involved in producing instructional computing materials," said Administrator Carolyn Stauffer. "Our goal is to support innovative methods of learning through low cost computers and to improve the results of the educational process."

The Foundation seeks to place hardware in the hands of people who will further those educational methods which take best advantage of the personal microcomputer's capabilities. It is anticipated that funding authorization will be in excess of a quarter million dollars during the first two years.

Although Apple Computer Inc. is the major donor, the Foundation is an independent corporation governed by a Board of Directors drawn from prominent leaders in the business and education communities. Proposals, initially

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CONTINUED FROM PAGE 1

screened by the Foundation staff, will be reviewed by an Advisory Board for final recommendations to the Board of Directors. Announcement of the first grant awards will be in October of this year.

An individual or group can apply to the Foundation for a grant of hardware equipment and make a parallel application to federal or state organizations for further funding. The Foundation Center, 312 Sutter Street, San Francisco, is one of several organizations supplying information on available funding in particular areas of interest.

As continuing evidence of its commitment to education, the Foundation will sponsor the Education Program Information Center (EPIC). EPIC supports microcomputer users in developing new instructional programs and in obtaining available information on educational materials. The center will publish information packages containing design and development guides, editorial and marketing guidelines, software techniques and authoring tools. "Authors are encouraged to submit their work to the center for review and feedback on the most effective uses and placements of their materials," says Dr. Richard Ballard, manager of EPIC.

Further assisting microcomputer users, EPIC's Users Guide gives overviews of state-of-the-art computing, plus critical reviews of educational programs available for popular small computers.

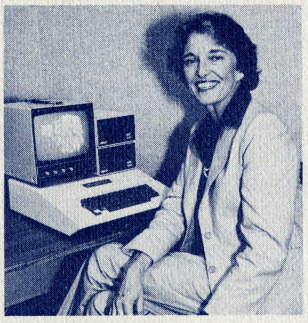
For information about the Apple Education Foundation, write to:

Carolyn Stauffer, Administrator
Apple Education Foundation
20605 Lazaneo Drive
Cupertino, California 95014

For more information about EPIC contact:

Dr. Richard S. Ballard, Director
Educational Program Information Center
Apple Education Foundation
20605 Lazaneo Drive
Cupertino, CA 95014

"Who's Whom"



CAROLYN STAUFFER — FOUNDATION ADMINISTRATOR

Carolyn Stauffer, Foundation Administrator, establishes grant-making procedures and interacts with the Board of Advisors. After nine years experience in computer curriculum development at Stanford Institute for Math Studies and Social Studies, Ms. Stauffer also worked with RMC Research on a two-year project to demonstrate the effectiveness of computer assisted instruction for special education.

She believes strongly in the microcomputer as an educational tool, "a tool to be used with **other** tools," which increases student motivation and improves retention.

MINNESOTA: LEADER IN COMPUTER EDUCATION

Minnesota — land of 10,000 lakes — is a flagship in computer education. 94% of all Minnesota students are involved with computer education either through time-sharing or microcomputer use. In 1974, the Minnesota Educational Computing Consortium began to promote supplemental learning activities through computers. Until 1978, MECC relied exclusively on time-sharing services. Prompted by the introduction of new technology, MECC began looking at microcomputers.

Dr. Kenneth E. Brumbaugh, Manager of User's Services for MECC, worked with a team that examined most available microcomputers and selected Apple II because its flexibility and capability lend it to broad educational applications. "We use it in all aspects of learning," said Brumbaugh, "from hog management and tractor depreciation to vowel endings and career guidance." Brumbaugh added that promoting computers in Minnesota was as easy as introducing cheese in Wisconsin. "Due to the influence of Honeywell, Univac, and Control Data Corporation, all of which are major Minnesota industries, Minnesota ranks high in computer literacy — probably as high or higher than Northern California and Boston."

The computer sophistication of student and teacher creates the major difficulty Brumbaugh encounters — finding time to develop software for the Apple II. Brumbaugh's staff of nine continually reviews manuals and programs and maintains contact with Apple users. Brumbaugh advises other educators who are comparing microcomputers to shop around. "You can pay much and receive little. Sometimes you pay ten times what a machine is worth." Brumbaugh prepared Microcomputer Report '79 detailing the MECC use of Apple II. To order, send $10 to: Ken Brumbaugh, MECC, 2520 Broadway Drive, St. Paul, MN 55113.

An update on the Minnesota Educational Computing Consortium will be included in future newsletters.

NEW SOFTWARE FROM MECC . . .

Apple Computer Inc. has signed a contract with the Minnesota Educational Computing Consortium to distribute educational software that MECC has written for the Apple II. The first programs will focus on music education, while future software will cover a wide range of subject areas. All Apple/MECC software will be available for purchase from your local Apple dealer.

Editorial by Roger Cutler

OPPORTUNITY.

We all encounter it from time to time. The chance to do something meaningful. Significant. Something that really **matters**.

That's what microcomputers offer education today. Opportunity.

We could talk about the importance we see microcomputers having in education. "Revolutionary." "Most significant advance in educational technology since chalk and slate." You know the rhetoric.

But how?

How can we, the manufacturers, know what you need so we can further develop this new opportunity? How can we keep track of the explosion of new uses, ideas, software, results, people, etc.? How can we accomplish all that needs to be done?

Let's Communicate.

This newsletter is a step onto a two-way street, a straight-forward approach to communication. Apple Education News is designed for us to communicate with each other — you with us, each of us with each other.

Share.

Share ideas. News about what's going on. Who's doing what. Who needs help. Has help to give.

We need your help. Part of our job is to advise and recommend what Apple needs to do to support education. Like the Foundation. And this newsletter. (And, yes, about the location of "RESET"!)

So let us hear from you. New applications. Software sources. Questions.

Won't it be great when computers **really succeed** in education this time?

Pascal Spoken Here

Apple Computer Inc. announces the release of UCSD Pascal for the Apple II. The UCSD Pascal System includes not only the Pascal language, but also offers a complete operating system, editor, and utilities and extensions to take advantage of Apple's graphics, color and audio capabilities.

Pascal is a block-structured programming language that encourages good program habits by its very structure. It is becoming increasingly popular as a programming language to teach in high schools, colleges and universities around the country and in Europe.

Apple PASCAL™ operates in a 48K Apple II with one disk drive. The package includes: a language card (16K RAM, 2K ROM) that increases the Apple's total RAM to 64K; 5 diskettes with Integer BASIC, Applesoft BASIC, and the Apple PASCAL™ system; and a full set of manuals.

Apple PASCAL™ can be ordered for $495 from your local Apple dealer. Part number A2B0006.

Apple Computer Inc. is the first major personal computer manufacturer to offer a factory-supported implementation of UCSD Pascal.

VIDEODISC BREAKTHROUGH ANNOUNCED . . . . . .

There's a V.I.P. at Utah State University.

The V.I.P.? Videodisc Innovations Project.

Robert Woolley and Kent Wood, faculty members at Utah State University, are completing an evaluation of the videodisc produced by Music Corporation of America and interfacing it to the Apple II to make it "intelligent."

The videodisc — for fifty years a dream of scientists — is a real breakthrough in educational uses of computer-assisted learning. The disc resembles a glass L.P., holds 30 minutes of video, and is played by a laser beam. The videodisc has 54,000 frames of information, can call full visuals, and can intermix all types of media including motion, sound, and stills. The Apple II, connected with the videodisc, creates one of the most powerful tools in education.

"Economically," says Woolley, Director of the Curriculum Materials Center, "the videodisc can reduce the cost of a ten minute educational film from several hundred dollars to a purchase price of $.67 per copy, assuming the distribution is 5-10,000 copies."

Applicable to all aspects of learning, the videodiscs currently are used in varied programs including learning disability curricula, library instruction, training media aides, and parenting. "The unique aspect of the videodisc is that it's programmable," said Woolley. "For instance, in the parenting disk, you are given a situation, make a response on the Apple, and are answered by a commentary. The advantage of the videodisc is its versatility. It's not a record; it's a playback medium, and when connected to an Apple, is capable of giving a response."

Atlanta and Seattle are test markets for home entertainment videodiscs and "the response far exceeds production. You've got to line up to get one," said Woolley. Current price is $695.

Until now educators had to purchase home units for the classroom. However, soon teachers will have access to educational videodiscs manufactured by Pioneer Electronics. Price has not been determined.

For fuller explanation of the capabilities of the videodisc see the May, 1979, issues of **Educational and Industrial Television** and **Instructor** magazines, or contact Robert Woolley, Utah State University, Logan, Utah 84332.

Spotlight

APPLES ON THE MOVE!!!

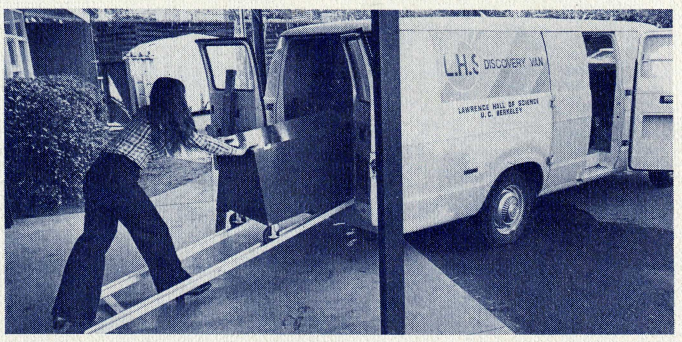
If the kids can't come to the computers, bring the computers to the kids — or so figures Joyce Hakansson, coordinator of computer education at Lawrence Hall of Science, Berkeley, California.

Lawrence Hall specialized in presenting varied aspects of science to all ages. Joyce says, "We've had a successful computer time-sharing program at Lawrence since 1972, but Proposition 13 cut back on field trips to our computer education center." The solution? Dr. Arthur Luehrmann, Assistant Director at Lawrence Hall, and Joyce designed a computer caravan which comes to the students to demonstrate computer usage.

The two computer specialists received 15 Apple II's by a grant from the Apple Education Fund, the predecessor to the Apple Education Foundation. They constructed bright red, specially-designed carts to hold the computers, and converted an ordinary van, already used by Lawrence for shuttling science exhibitions to schools, to an **Apple Van** to transport the computer demonstration. Charging $3 per student, Lawrence provides the wheels, the Apples, and the computer-education trained teachers. Schools reciprocate with two free hours, a classroom. and students.

"Compared to many field trips, we're a bargain," says Dr. Luehrmann. "Schools have realized by the time they've charted a bus, arranged insurance, and hired a substitute teacher, they were out far more than we charge. Sometimes the schools pick up the tab, often the students do. We've discovered that funds are usually found."

Besides a one-shot introduction, Lawrence designs ongoing programs lasting several weeks to educate kids about computers. In either the long or short-term demonstrations, two students share a computer. Peer teaching is a definite advantage of the program, according to Joyce. "Our purpose is to provide an awareness, an acquaintance with computers. With two on a machine, nobody is afraid of making a mistake. It's similar to dipping a toe in untried waters — with company."

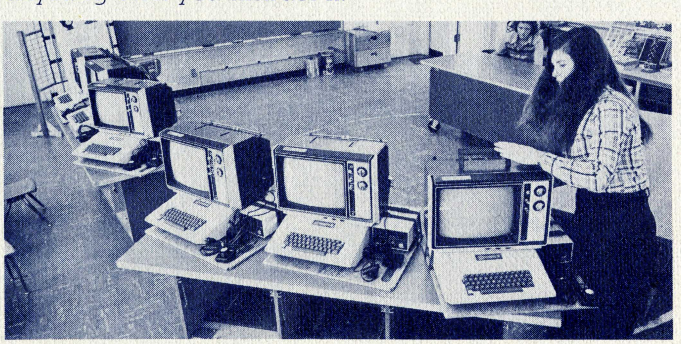


The limited classroom time prohibits lengthy explanation of introductory programming. "We needed a short, simple, flashy program through which the student could have immediate 'hands-on' experience," says Dr. Luehrmann. Apple II met the task. Using Apple's eye-catching graphics and Lawrence's well-planned programs, students reinforce math skills, play dictionary games, execute complex designs, and even write their own programs.

Besides Apple's graphic capabilities, it is lightweight, (about 15 lbs.), mobile, and durable — all important considerations when you're transporting your Exhibit A hundreds of miles weekly and trusting it to eager but inexperienced operators. Despite the heavy application of the 15 Apples in the program, repairs on the machines are almost nil. "During the week 30-60 students operate them two to four hours per day; on the weekend, the public rents time on them at Lawrence Hall. They are our most popular exhibit," says Joyce.

So popular are the Apple II's, the calls from educators are greater than can be met. Even during early planning of the program by Lawrence, the teachers received immediate requests for bookings. "The Apple Van could be out every day of the week all week," says Joyce, "and we'd still have calls for more. Actually I'd like to see the Apple Van travel to shopping centers, hospitals, recreation centers, rehabilitation groups, airports — wherever people gather — so we can demonstrate computer capabilities. I believe that eventually, to be literate will mean to be **computer** literate."

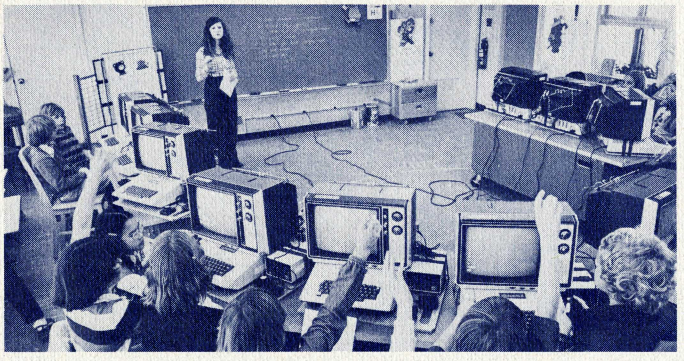
"In demonstrating computers," Joyce continues, "we stress their use as an intellectual and vocational tool. The computer employs logic and eye-hand coordination skills. It forces disciplined thinking; the operator must express ideas and test their quality. The computer is non-judgmental, non-punitive; it applies only natural consequences. But the computer is not in control. It won't do anything until you instruct it."



Currently the Apple Van brings computer awareness from fourth graders to adults. On the days the Apple Van pulls up to the school yard, school administrators and district officials often visit the classroom to observe the demonstration. Joyce hopes computer programming will soon be a standard feature of all junior high curriculum. A former history teacher, Joyce feels computers can cover all aspects of education. "Can't you see American History students calling up a simulation of Salem in 1600? Computers could really involve students in life's ramifications and decisions."

Joyce advised educators to consider these points of computer learning:

1. Organize a computer lab in your school rather than placing computers in individual classrooms. The lab becomes neutral territory offsetting claims that "this is my computer."
2. Even in days of lean budgets and austerity cuts, money can be found. Several years ago Joyce promoted buying a computer for her child's school — she even hosted the IBM sales rep at her house for lunch. Funding floundered until Joyce hit upon holding a Fakery Bakery, a reverse of the traditional bake sale. "You don't bake, you don't buy, you donate what you would have spent on ingredients, purchases, diet aids, and doctor bills," explains Joyce. The result: a successful non-sale and the school purchases a computer.



"Money is there for computer education," says Joyce, "you just have to know how to free it." People like Joyce Hakansson and Arthur Luehrmann realize the value of computer education — and they're determined to see it happen. They've got the cart, the Apples, and the customers.

For more information on this program contact:

Dr. Arthur Luehrmann
Computer Education Project
Lawrence Hall of Science
Berkeley, California 94720

Editor's Note:
Since the writing of this article, Joyce Hackansson has accepted a position with the Children's Television Workshop in New York. She will be utilizing her experience in developing recreational software for this innovative program. Write to her at:

Children's Television Workshop
1 Lincoln Plaza
New York City, New York 10023

RESOURCE CENTER

New Apple-compatible hardware and software products of interest to the educator can be ordered from your local dealer.

HARDWARE

ALF Music Synthesizer boards plug into the Apple and connect to a hi-fi system to create a powerful yet inexpensive music synthesizer. $265 includes music language software, demonstration music programs, manual and board. ALF Products, 1448 Estes, Denver, CO 80215.

The MR-500 Mark Sense Card Reader is available with an interface to the Apple II, and comes with software to read and interpret data entered into the computer using cards marked with #2 pencil. $750 from Chatsworth Data Corporation, 20710 Lassen Street, Chatsworth, CA 91311.

An 11-megabyte 8" Winchester drive hard disk has been announced for the Apple II. The memory device looks to the Apple like 82 floppies, and is compatible with either 3.2 DOS or Pascal. $5,350 includes a microprocessor-based intelligent controller and the sealed drive from Corvus Systems Inc., 900 South Winchester Blvd., San Jose, CA 95128.

SuperTalker provides reasonable clear human voices from your Apple II. The board, which plugs into the Apple, comes with foreign language training and other educational demonstration software. $289 from Mountain Hardware, 300 Harvey West Blvd., Santa Cruz, CA 95060.

TEKSIM is an Apple II/Tektronix 4010 graphics terminal simulator program available in a ROM. With TEKSIM plugged into the Apple II, you can display Tektronix graphics data from a host computer. ABW Corporation, P.O. Box M1047, Ann Arbor, MI 48106.

SOFTWARE

A comprehensive math curriculum presents math sequences in problem levels for grades 1 through 6. The classroom management program allows teachers to review student progress at each problem level. $300 for 12 diskettes and manual from Milliken Publishing Company, 1100 Research Blvd., St. Louis, MO 63132.

PDI offers more than a dozen education software programs for the Apple II, with particular emphasis in the language arts at the elementary and secondary school levels. Program Design, Inc., 11 Idar Court, Greenwich CN 06830.

SCARSDALE INTEGRATES COMPUTER EDUCATION THROUGHOUT SCHOOL SYSTEM

In Scarsdale, New York, educators are preparing students to enter an environment that is increasingly influenced by computers. Computers are integrated into the entire school system, Kindergarten through grade 12.

Robert Taylor, adjunct Assistant Professor of Education at Teachers College, Columbia University, predicts most of the nation's schools will imitate the Scarsdale project in the next decade. A member of an Association for Computing Machinery Subcommittee on Computers in Elementary and Secondary Schools, Taylor helped the Scarsdale, New York school system purchase and install ten Apple computers. One hundred teachers have been studying microcomputers since January, and the others will soon begin instruction.

Details of the project can be obtained from:

Dr. Robert Taylor
Teachers College
Columbia University
New York, N.Y. 10227

QUESTIONS AND ANSWERS

Q. Does Apple Computer Inc. offer an education discount?

A. Apple does not offer an education discount, nor do we sell direct from the factory to educational institutions. In the past Apple has supported specific projects from the Apple Education Fund, and has established the Apple Education Foundation to expand this activity (see story page 1). We believe it is in the best interest of the customer to have a local dealer to support and service the equipment.

Q. What about service? Does everything have to be sent back to Cupertino?

A. As of September 1, 1979, Apple Computer Inc. has established over 400 Level I Service Centers nationwide. These service centers are intended to provide Apple customers with quick, accurate "Factory Authorized" service, often while you wait! Because of Apple's modular design, units with stubborn or elusive problems can be exchanged in your machine for tested ones and the troublesome part returned to the factory while you are back up-and-running.

Q. What about service contracts?

A. Watch for announcements concerning new service programs at your local Apple Dealer. It's our way of making the best . . . even better!'

CREDITS

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Writers . . . . . Margo Landrum
Barbara Zahner
Production . . . . . Tricia Willcoxon

dialogue

JOYCE HACKANSSON
YOU'VE GOT A LONG WAY TO GO, BABY

(A dynamic believer in computer literacy, Joyce coordinates computer education at Lawrence Hall of Science in Berkeley. In the fall Joyce will assume a new positon with Children's Television Workshop developing software for a computer education center at Sesame Place in Buck, Pennsylvania.)

The days of Doris Day movies and luxury wives are dead. Today's woman will spend 50% of her life working outside her home. She needs a fulfilling, influential career. However, we divert women from financially rewarding, decision-making fields such as engineering and computing, directing them into the helping professions which lack high salaries, influence, and opportunities.

Even if a woman has no desire to enter a technical field, she needs computing literacy to ensure a complete education. The world has changed; the 3R's are not enough. Computing as another basic, essential skill must be mastered. Besides preparing them for the realities of the 1980's-'90's, computers enable females to become problem solvers, to obtain and use information. Computers also prepare women to be confident, competent citizens qualified to handle finances, understand a cashless society, manage shopping, and control key data. But the biggest reason women need computer literacy is to ensure their vocational viability. Employment opportunities in the future will depend on some computer knowledge. A marketing manager, a ward nurse, a drafting technician will use computers as management tools.

We teachers are guilty of sidetracking our female students away from computers. We locate computer labs in the basement or math department — both male bastions. Computing teachers (usually male) expect more from male students, respond more to their enthusiasm. We need to **expect** females to learn computing, just as we expect them to master spelling words and math drills.

Ideally, computer education should begin in preschool or elementary level where female teachers predominate; therefore, the girls would have female role models. All junior high schools should require a computer course. The curriculum should include the basic vocabulary necessary for entry level jobs, programming, hands-on experience, and practical applications of computer education.

Today, 53% of all American women work, yet only 4% earn over $25,000 per year. If we begin today to prepare our girls for a future with a computer in it — perhaps we can turn around that dismal statistic.

Dialogue is a regular column intended for the exchange of opinion by the readers on topics related to computers and education. Please address your essays to:

Dialogue
Apple Education News
10260 Bandley Drive
Cupertino, CA 95014

BULLETIN BOARD

SHOWS —

During the past year Apple Computer has exhibited at many national and regional education conferences. Among the shows attended last year (and probable candidates for this coming year):

- National Council of Teachers of Mathematics
- Association for Educational Communications and Technology
- Association for the Development of Computer-based Instructional Systems
- Association for Educational Data Systems

CORRESPONDENCE & COMMUNICATIONS

A number of educators have expressed an interest in establishing SIG's (Special Interest Groups) of the Apple Educator User Group. Listed below are two volunteers for SIG's. Other interest groups could be formed for disciplines (math, chemistry, etc.) or affiliations (elementary, secondary, higher education, business and industrial training, etc.). If you are interested in starting a SIG, drop a note to Apple Education News.

SIG — Special Ed/Handicapped
Bernie Urban
6205 Walhondling Road
Bethesda, MD 20016

SIG — Music Education
David Shrader
Department of Music
Illinois State University
Normal, IL 61761

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This publication is issued for the educational community. We'd like to hear your ideas and opinions or answer your questions in the Newsletter.

Dear Apple Computer: